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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/816,157	03/26/2001	Chi-Cheng Ju	P20832	6433

7055 7590 06/21/2004

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RESTON, VA 20191

EXAMINER

LEE, RICHARD J

ART UNIT	PAPER NUMBER
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2613

DATE MAILED: 06/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/816,157

Applicant(s)

JU, CHI-CHENG

Examiner

Richard Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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1. The applicant's arguments from the amendment filed April 16, 2004 have been noted and considered, but are deemed moot in view of the following new grounds of rejections.
2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwamura of record (5,534,928) in view of Fung (5,909,224).

Iwamura discloses an apparatus and method for decoding a plurality of encoded video signals as shown in Figures 1-8, and substantially the same method for reordering a decode order into a display order of an image, the decode order comprising an I-picture, a P-picture, and a B-picture (see Figures 2-8) as claimed in claims 1-4, comprising the same determining a first picture of the compressed picture sequence (see Figure 1 and column 1, lines 26-52, columns 5-6); if the first picture is I-picture, decoding the first picture (see Figure 1) and storing the decoded first picture in a first buffer (i.e., 27a of Figure 1, see column 7, line 52 to column 8, line 15); obtaining a first virtual picture (i.e., *B1 of Figure 3E, see column 9, line 66 to column 10, line 29) according to a predetermined manner, sending the first virtual picture to a second buffer (i.e., 27c of Figure 1) for display, wherein the predetermined manner, responsive to a parameter, generates the first virtual picture using a decoded picture pre-stored in a third buffer (i.e., B1 is decoded using the I1 picture stored in the third buffer 27b and the P1 picture, see column 9, lines 39-50); determining a second picture (see Figure 1), if the second picture is P-picture (i.e., Po of Figure 3E), decoding the second picture and storing the decoded second picture into a third

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buffer (i.e., 27b of Figure 1); obtaining a second virtual picture (i.e., B2 of Figure 7E) according to the predetermined manner, sending the second virtual picture to the second buffer (i.e., 27c of Figure 1) for display, wherein the predetermined manner, responsive to a parameter, generates the second virtual picture using a decoded picture pre-stored in the first buffer (i.e., B2 is decoded using the I1 picture stored in the first buffer and the P1 picture, see column 10, line 65 to column 11, line 18).

Iwamura does not particularly disclose, though, wherein the second buffer is the only buffer for displaying the image in the display order as claimed in claim 1. However, Fung discloses an apparatus and method for managing a frame buffer for MPEG video decoding as shown in Figure 2, and teaches the conventional use of a dedicated display buffer (26 of Figure 2) that accepts I, P, and B frames from frame buffers 24 of Figure 2, and which display buffer 26 is the only buffer for displaying the images in the display order (see display order as shown under display buffer 26 of Figure 2). Therefore, it would have been obvious to one of ordinary skill in the art, having the Iwamura and Fung references in front of him/her and the general knowledge of display buffer memory systems, would have had no difficulty in providing the display buffer 26 of Figure 2 of Fung after the frame memories 27a-27c of the MPEG video decoder as shown in Figure 1 of Iwamura for the same well known use of a single display buffer for controlling/displaying the MPEG images purposes as claimed.

4. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwamura and Fung as applied to claims 1-4 in the above paragraph (3), and further in view of Tahara of record (5,473,380).

The combination of Iwamura and Fung discloses substantially the same method as above, further including determining a second picture (see Figure 1), if the second picture is I-picture, decoding the second picture (see column 7, line 28 to column 8, line 15); obtaining a second virtual picture (i.e., B2 of Figure 7E) according to the predetermined manner, sending the second virtual picture to the second buffer (i.e., 27c of Figure 1) for display, wherein the predetermined manner, responsive to a parameter, generates the second virtual picture using a decoded picture pre-stored in the first buffer (i.e., B2 is decoded using the I1 picture stored in the first buffer and the P1 picture, see column 10, line 65 to column 11, line 18).

The combination of Iwamura and Fung does not particularly disclose, though, storing a decoded second picture into a third buffer as claimed in claim 5. However, Tahara discloses a picture signal transmitting system as shown in Figures 6 and 9, and teaches the conventional use of a frame memory structure which utilizes a bank changeover feature that has the capability of storing an I frame in either one of the memories (i.e., 63a and 63b of Figure 6 or 86a and 86b of Figure 9, see column 8, lines 30-49, column 10, line 48 to column 11, line 55). Therefore, it would have been obvious to one of ordinary skill in the art, having the Iwamura, Fung, and Tahara references in front of him/her and the general knowledge of memory devices within decoders, would have had no difficulty in providing the bank changeover memory structure of Tahara within the decoder of Iwamura so that the decoded second picture may be stored in a third buffer for the same well known memory sharing purposes as claimed.

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5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

6. Any response to this final action should be mailed to:

Box AF
Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:


(703) 872-9314, (for formal communications; please mark "EXPEDITED PROCEDURE") (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Lee whose telephone number is (703) 308-6612. The Examiner can normally be reached on Monday to Friday from 8:00 a.m. to 5:30 p.m, with alternate Fridays off.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group customer service whose telephone number is (703) 306-0377.


RICHARD LEE
PRIMARY EXAMINER

Richard Lee/rl



6/14/04